

MOST POPULAR MODELS OF **American Beauty** SOLDERING IRON LINE

FOR USE ON EITHER ALTERNATING OR DIRECT CURRENT — AC - DC



No. 3114— $\frac{1}{4}$ " tip



No. 3118-SC— $\frac{1}{8}$ " tip

No. 3118-X— $\frac{1}{8}$ " tip

No. 3120-SC $\frac{3}{16}$ " tip

No. 3120-X $\frac{3}{16}$ " tip



*No. B-2000— $\frac{1}{8}$ " tip

*No. B-2000— $\frac{1}{16}$ " tip



No. 3118 — $\frac{1}{8}$ " tip

No. 3120 — $\frac{3}{16}$ " tip



No. 3118-SCP— $\frac{1}{8}$ " tip

No. 3118-XP— $\frac{1}{8}$ " tip

No. 3120-SCP $\frac{3}{16}$ " tip

No. 3120-XP $\frac{3}{16}$ " tip

AMERICAN BEAUTY Bantams are small, compact, lightweight irons designed especially for the electronic and allied trades. Instantly ready for use, yet they can be idled for as much as twenty-four hours a day without damage to iron or tip. All provide ample heat for fine and medium-fine soldering—either intermittent or production line.

Made in two series—Standard and "X." Standard, 30-watt (also 40-watt)—six models. "X," 50-watt super-hot—six models. Both series are the same in design except that the "X" series features scientifically-vented casings to assure cool handles. Standard series is also popular with the hobbyist, radio amateur, do-it-yourself'er, etc.

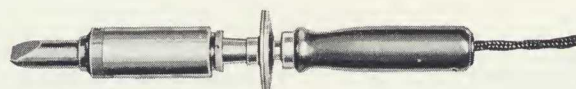
*B-2000 is a microminiature soldering iron, 22 $\frac{1}{2}$ -watt, large heat-capacity, for soldering microminiature components.



No. 3125— $\frac{1}{4}$ " tip. For production line use. The same general design as No. 3138 to 3198 series.



No. 3138— $\frac{3}{8}$ " tip. For production line use; also popular as a general purpose iron for home use.



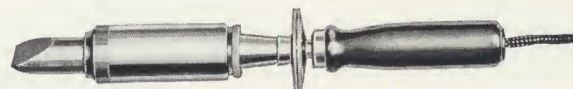
No. 3178— $\frac{7}{8}$ " tip. For heavier work than the No. 3158; for medium-heavy soldering of all kinds.



No. 3128— $\frac{1}{4}$ " tip. For servicing TV, electronic and radio equipment and similar light work.

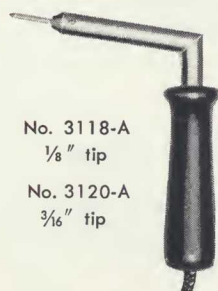


No. 3158— $\frac{5}{8}$ " tip. For same uses as No. 3138 but for applications that require a larger iron.



No. 3198—1 $\frac{1}{8}$ " tip. For use on the very heaviest soldering operations; commutators, sheetmetal work etc.

Always select an iron of size and wattage compatible with the work to be done.

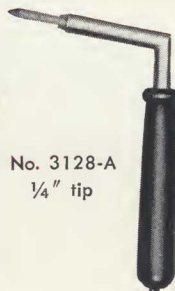


No. 3118-A
 $\frac{1}{8}$ " tip

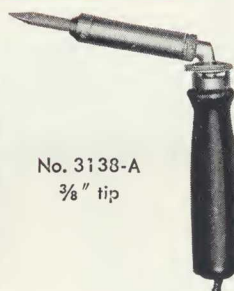
No. 3120-A
 $\frac{3}{16}$ " tip



No. 3125-A
 $\frac{1}{4}$ " tip



No. 3128-A
 $\frac{1}{4}$ " tip



No. 3138-A
 $\frac{3}{8}$ " tip

AMERICAN BEAUTY Angle-Type Casing irons are designed and intended especially for use on soldering jobs difficult to accomplish with conventional straight-casing irons.

Their distinctive shape, ingenious design and perfect balance assure most efficient operation on this type of work.

Available in 4 tip-sizes and 7 watt-inputs, a range of models is provided to meet nearly every need for soldering irons of this kind.

Instructions for the Proper Use and Care of **American Beauty** Electric Soldering Irons

DO Check the voltage of circuit to make certain that it conforms to the voltage rating marked on the soldering iron. The life of the heating element is materially shortened if voltage is too high and the iron will not heat properly if voltage is too low.

■ Make certain that there is good electrical contact between receptacle-outlet and attachment plug-cap. If receptacle-outlet contacts are worn, install new one.

■ Select an iron of a size and wattage compatible with the work to be done. The use of an iron that is either too small or too cool will cause the solder to "cold flow"—thus merely "sticking" the work together. An iron that is either too large or too hot may cause overheating of parts other than those to be soldered.

■ Clean work thoroughly before attempting to solder.

■ Use a mild flux—zinc-chloride or one of the commercial soldering pastes readily available everywhere.

■ Allow the soldering iron to attain full working temperature (five to ten minutes connected to current) before beginning soldering operations. The soldering tip **MUST** be heated sufficiently to heat the work

properly in order to attain a sweated solder bond.

■ Make certain that tip is **TINNED** before attempting to solder. (See "use and care of tips"—other side.)

■ Remove and clean copper tip regularly—daily if used continuously, or weekly if used occasionally. Unless tip is removed at regular intervals and the accumulated oxide removed, "freezing" of the tip to core of heating element is likely. Oxidation (scale) also acts as an insulator—keeping heat from tip. (Oxide should be removed from interior of core of heating element as well as from the tip.)

■ Maintain tip in a tinned condition at all times. Full efficiency of the soldering iron is dependent upon a properly cleaned and tinned tip.

■ Avoid dragging cord across wooden bench, or other rough or sharp surfaces, to prevent unnecessary wear on outer covering.

■ Keep cord free from kinks to prevent breaks.

■ Use heat-insulating stand supplied with iron. Scabbard or other enclosed type holders cause overheating of iron and are therefore not recommended.

DON'T Operate the soldering iron without a tip. The tip and heating element are designed to work together.

■ Attempt to use a tip that is too short to permit full penetration into core of heating element. Discard and replace it with a new one. American Beauty copper tips are designed to carry away the full volume of heat generated by the heating element of the iron for which they are intended. Therefore it is necessary for the tip to be fully inserted into the core of heating element to its full length at all times.

■ Try to control the heat of soldering iron by partial insertion of the tip into core of heating element. This will result in overheating the interior section of the core, distort it, and reduce the life of the heating element. (A new tip cannot fully enter core of heating

element if the core has been allowed to become distorted in this manner.) If the soldering iron gets too hot, disconnect it from current—or control its heat by the use of an American Beauty Temperature Regulating Stand. (An illustration and information are contained in this sheet.)

■ Allow soldering iron to idle connected to current for long periods of time—unless it is being used in conjunction with a Temperature Regulating Stand. (Continuous over-heating causes excessive oxidation and tends to shorten life of the heating element.)

■ Hammer the iron against a bench, or other object, to remove excess solder from tip—or for any other reason. Always wipe excess solder from tip with a cloth or small brush. (Abuse is the main reason for a "defective" soldering iron.)

NEVER use soldering iron without first making certain that set-screw is tightened on the tip and the tip is tinned.

NEVER cool soldering iron by immersing in water or liquid of any kind.

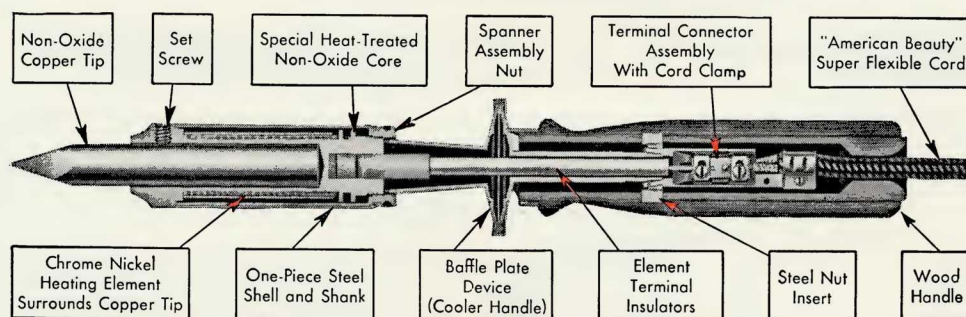
NEVER disassemble soldering iron unless necessary.

To Disassemble Nos. 3138-3198 series Soldering Irons. 1. Unscrew wood handle. 2. Disconnect element leads. 3. Unscrew the spanner-nut that holds core of heating element in outer casing. 4. Heating element should then be carefully withdrawn—without twisting.

To Disassemble Nos. 3128 and 3128-A Soldering Irons. These irons differ in element and casing construction from

the 3138-3198 series. Element-casing, handle-springs and terminal assembly are assembled as a unit. 1. Remove screw holding handle to casing. 2. Remove handle by backward pull from casing. 3. Disconnect cord from terminal assembly.

To Disassemble No. 3114, Nos. 3118-3120 series, Nos. 3125 and 3125-A, Soldering Irons. 1. Unscrew wood handle. 2. Disconnect element leads. 3. Unscrew roundhead machine screw at handle-end of casing and withdraw terminal assembly from casing. (Nos. 3118-3120 series only.) 4. Unscrew set-screw that holds tip in casing and remove tip. 5. Use drift or punch to remove drive-pin visible through set-screw hole. 6. Element should then be carefully withdrawn—without twisting.



This illustrates the simple unit-design, sturdy construction and some of the outstanding features of a typical American Beauty Electric Soldering Iron.

Instructions for the Proper Use and Care of American Beauty Copper Tips

The functions of the tip of an electric soldering iron are four-fold: 1. It stores and transmits heat from the heating element of the iron to the work. 2. It stores molten solder. 3. It delivers molten solder. 4. It withdraws surplus solder.

The proper preparation of the tip before attempting to solder with it involves the following:

FOR STANDARD NICKEL-COATED TIPS

With a tip that has never been used, be sure that it has first been tinned. This can be done in the following manner: The soldering iron should first be heated until it will melt solder. Place some solder flux on a piece of tin plate. Then melt some solder on to the tin plate. Rotate the heated tip in the flux-and-solder until its working surfaces become coated with solder. The tip is then ready for use. It must be maintained in a well-tinned condition at all times while it is in use. This aids in conducting heat into the joint or seam to be soldered. (Sometimes an occasional wipe with a piece of cloth, or even paper, will suffice to keep tip sufficiently clean for proper soldering.)

After a tip has become corroded and pitted—from the effects of flux, acid fumes, and/or natural wear—it is necessary that it be cleaned of oxidation and its faces filed until bright and free from pit marks. It must then be retinned before using again.

Whenever a soldering tip requires replacement for any reason—be sure to replace with an American Beauty copper tip of proper size for the particular catalog number of the

iron for which it is required. American Beauty copper tips are the least expensive in the long run. All are proportioned to the size of the iron for which they are intended.

FOR "PARAGON" and "SUPERIOR" QUALITY TIPS

American Beauty "Paragon" and "Superior" Quality copper tips have been given a special protective coating—for extra long wear under the most severe operating conditions. They will render considerably longer service than standard nickel-coated tips. These are what might be termed "premium tips"—more expensive in initial cost but considerably less costly to use in the long run for the requirements for which they are intended.

These tips should NEVER be filed, sanded, ground, re-shaped or dressed on a grinding wheel or by any similar abrasive means. To CLEAN the tip it is only necessary to heat to operating temperature, wipe with an asbestos cloth, or any cloth if wiped quickly—then re-tin.



Temperature Regulating Stand

For maintaining iron at working temperature or lower while connected to current and not in use. Available in two models and either with or without safety guard. Nos. 475 and 475-SG for controlling irons from 100 to 660-watt input; Nos. 476 and 476-SG for irons from 30 to 85-watt input. For AC current only.

AMERICAN ELECTRICAL HEATER COMPANY

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